

# Rockville Drinking Water Treatment

The City of Rockville's Water Treatment Plant was put into service in 1958 and, at that time, was capable of producing four million gallons per day (MGD) of treated water. The plant was upgraded in 1965 to increase production to eight MGD. In the mid-1990's additional upgrades to the plant were carried out in order to meet U.S. Environmental Protection Agency (EPA) and Maryland Department of the Environment regulations. Since that time, an average of five MGD per day of raw (untreated) water has been withdrawn from the Potomac River, treated by the water plant to remove suspended sediments, algae, parasites, bacteria and metal, and then distributed to the City's water customers.

## Screen

Water from the Potomac is pumped through a screen to remove large debris such as sticks, leaves and rocks. If algal blooms are present in the raw water withdrawn from the River, it is treated with a chemical containing potassium (Potassium Permanganate  $\text{KMnO}_4$ ).

## Coagulation

Water is treated with compounds that make small suspended particles stick together and settle out of the water. This particle conglomerate is removed from the water prior to filtration.

## Sedimentation

Water is passed through a settling basin or clarifier allowing time for mud, sand, metals and other sediment to settle out.

## Filtration

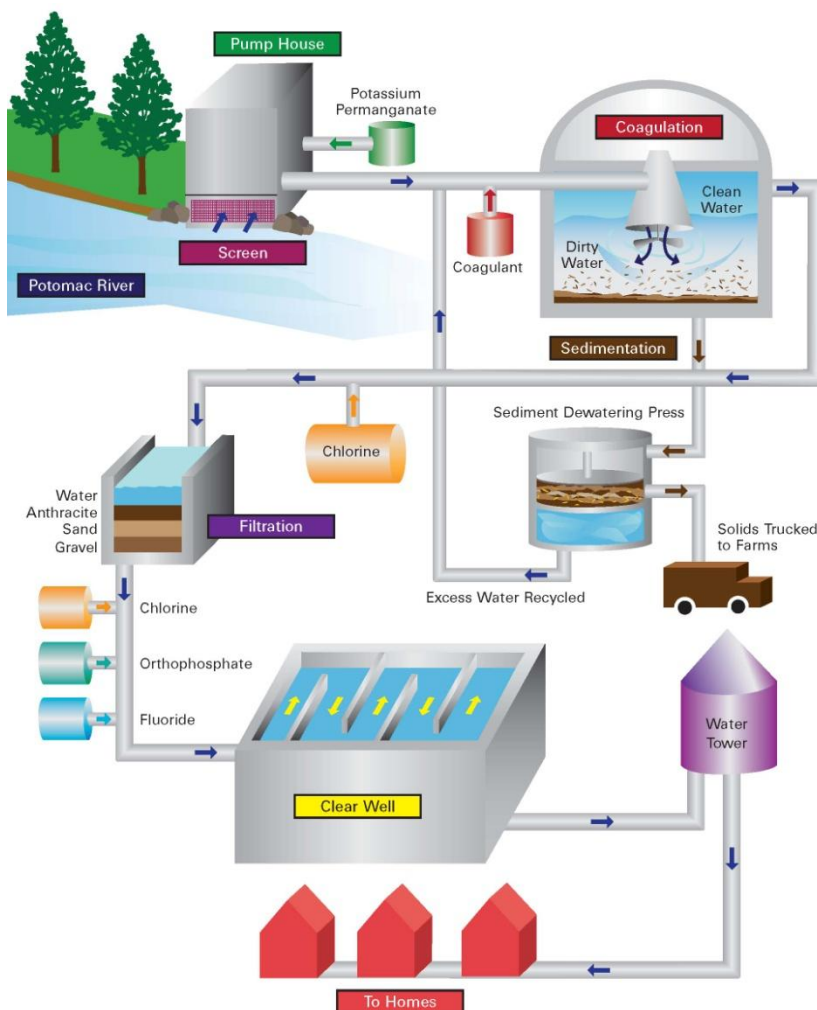
Water is passed through a dual media (sand and anthracite) filter, which removes many remaining pollutants.

## Disinfection

Chlorine is added to the water to kill and/or inactivate any remaining pathogens. Fluoride is added to prevent tooth decay and a corrosion inhibitor is added to preserve the pipes that deliver the water to homes and businesses.

## To Homes

The treated water is stored in three storage tanks and is gravity-fed to houses and businesses when needed. The water is sampled at the plant, in the distribution system and at the tap in homes and businesses for lead, copper, other potential harmful chemicals, bacteria and residual chlorine.



For more information visit [EPA's Safe Drinking Water Act \(SDWA\) web page](#) or the [State of Maryland Water Supply program](#). View a full-size [PDF of the water treatment process](#).